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A CONTRIBUTION TO THE ORNITHOLOGY OF GARHWAL¹

BY

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(*With a map and two plates*)

In this essay I propose to deal with the Alakananda Valley above Rudra Prayag, the Mandakini Valley and the Dhauli Ganga Valley which drains a large portion of eastern Garhwal. The southern regions of Garhwal and the Rishi Ganga flowing down from the Nanda Devi Sanctuary are not included since I have not had the opportunity of visiting them. The Sanctuary being a remarkable valley, surrounded by a formidable ring of snow mountains, requires considerable time and effort to visit, and merits a paper all to itself. Southern Garhwal consists of the foothills south of the Alakananda River and would not differ very appreciably from the Mussoorie hills. It is the three valleys mentioned above that are interesting, leading as they do to the high regions below the perpetual snows and the red hills of the Zasker Range on the border of Tibet.

It is obvious that to be able to comprehend the status of bird life in any region properly it is necessary to consider the ecological factors that so predominantly influence the biological world. The geographical position, topography, the annual precipitation etc. are all very important. However, it is not possible to go into all the aspects of the ornithology of a region like Garhwal in the limited scope of this paper and without a more profound study than I can claim to have made. This article is just a preliminary, and I hope that some readers may find it interesting enough and an incentive to follow up the study of Himalayan birds along any paths it may suggest. Since the entire area was covered in such a short period, namely May and June, and most of that time spent on the march, many species have got left out which otherwise would have made my list of birds more complete.

Although the dividing line between the drier West Himalayan and the more humid East Himalayan sub-specific regions lies somewhere in Nepal, Garhwal is favourably enough placed near the transitional zone

¹ See also the very useful complementary paper 'A Note on the Nidification and Habits of some Birds in British Garhwal' by A. E. Osmaston, *JBNHS*, Vol. 28 : pp. 140-160, December 1921—EDS.

between the two. Laughing-thrushes which in the Simla hills are not common except in the thickest forest are very frequent here. The Red-headed Trogon, formerly believed to occur as far west as Almora only, was seen by me in fair numbers in forest at the base of Tungnath mountain, and there is no reason to believe that more examples of this kind cannot be revealed by a careful survey.

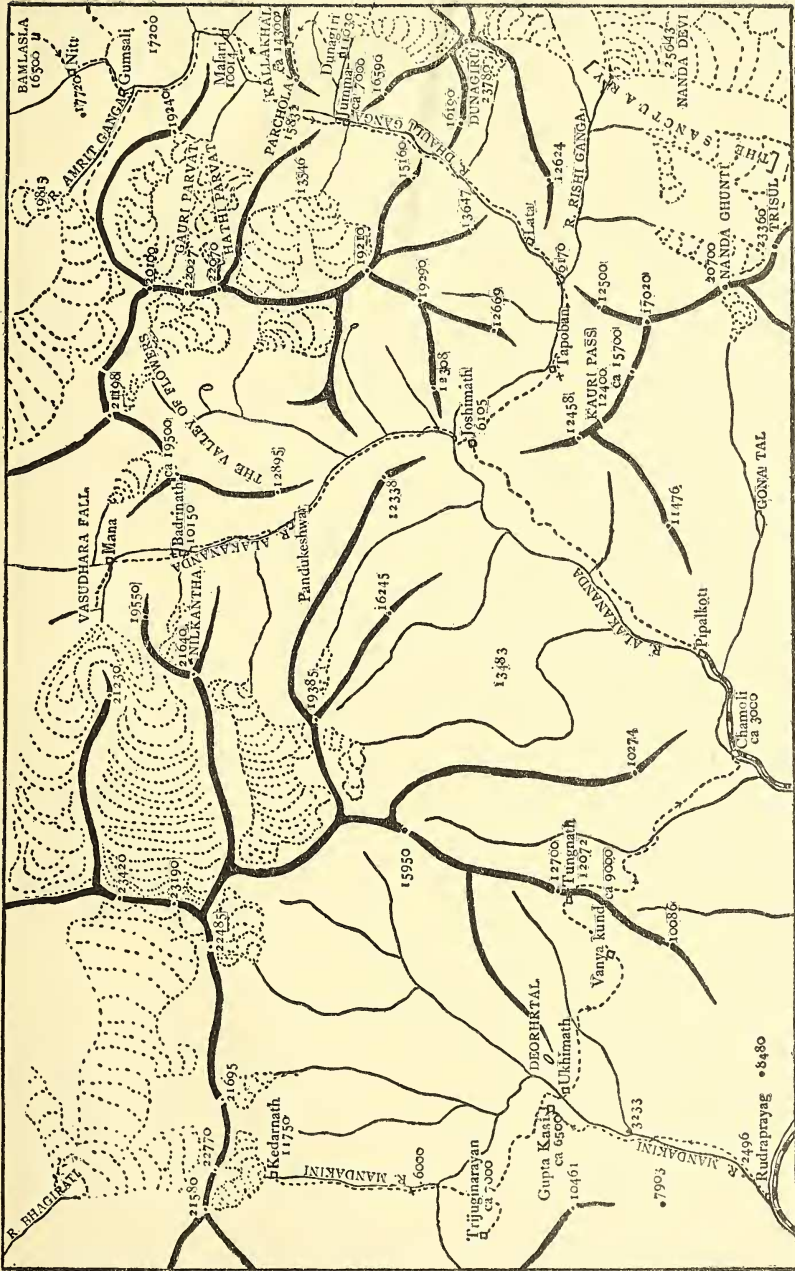
From geographic and climatic considerations, the region under mention can be most conveniently divided into three zones, viz., the Mandakini Valley to the west, the Alakananda Valley and the Dhauli Ganga Valley to the east. These three valleys, due to the configuration of the mountain ranges, have a rainfall heavier in the west and less so in the east, which is absolutely at variance with the general trend in the Himalayas. The reasons will be clearer when each zone is discussed individually. Another very important factor is the great difference in altitude met with here, giving climatic types ranging from tropical heat to the frigid cold of the perpetual snows. In the lower Mandakini a traveller will find fine topes of mangoes ringing to the calls of koels and Indian orioles with a backdrop of snow mountains over 20,000 ft. high. The whole effect is stupendous, and with one sweep of the eye I saw a slope of cultivation ranging from fields in the grasp of a parched summer, through ripe winter wheat followed by those still green with spring wheat, to those just released from the frosty hand of winter. Thus in the span of a few miles live spotted doves of the Indian plains and snow pigeons of the glacier edges, and whereas a king vulture of the lowlands may soar abreast of the observer at 10,000 ft. the lordly l ammergeier of lofty crags will course down a ravine, below one, at 3,000 ft.

THE MANDAKINI VALLEY

Draining a section of the southern face of the main Himalayan axis, the Mandakini and her tributaries quickly flow down to six thousand feet, being less than three thousand feet elevation at her confluence with the Alakananda at Rudra Prayag. Till Gupta Kashi the pilgrim track passes through dry subtropical deciduous forest and is shaded by gracious mangoes and peepal trees. The birds here met with are golden orioles, koels, ring doves, spotted doves, Franklin's wren-warblers and the like. At Gupta Kashi the path rises suddenly and zig zags up to six thousand feet; keeping between the six thousand and seven thousand foot contours for most of the way, it rapidly ascends within nine miles to reach Kedarnath at 11,700 ft.

The general trend of the valley is from north to south giving free access to the rain-bearing winds. Consequently the rainfall is very high and the forest biotope from six thousand upwards is of broad-leaved trees, oak being the dominant. Above 7,000 ft. the red flowering *Rhododendron arboreum* and above 8,000 ft. spruce (*Picea morinda*) constitute the chief co-dominants. A sombre spruce forest covers the watershed range of the Mandakini and the Bhagirathi river systems. Pendant moss drapes the tree trunks, and ferns form a rank undergrowth. The chir (*Pinus longifolia*) grows on certain spurs, exposed to the sun at lower heights.

The Tungnath mountain to the east rises to 12,500 ft. above the lesser foothills providing a sweeping view of the snowy mountains of the entire Garhwal. Warm air from the tropical valleys at its base quickly melts the snow and a thick oak forest clothes the slopes right up to 11,000 ft.



Adapted from Survey of India map of Garhwal.

SCALE Approximately One inch = Eight miles

Drawn by author

LEGEND

- Hotsprings = +
- Motor Road = ———
- Author's Route = - - - - -

LEGEND

- Mountain Ranges with heights in feet, = [shaded area]
- Pass = [dashed line]
- Clactos = [dotted line]

G A R H W A L

Undergrowth is very dense providing shelter to innumerable pheasants ; and trogons are fairly plentiful in the branches overhead. The tree-line is girt by lilac-flowering bushes of *Rhododendron campanulatum*. This lovely rhododendron is scarce around Kedarnath, though in all the side valleys to the east it is common.

THE ALAKANANDA VALLEY

The Alakananda River for most of its length from Joshimath to Rudra Prayag flows in an east-west direction, and the valley has a close resemblance to the Sutlej Valley. The northern slopes are steep and devoid of any forest except in the narrow side-streams, while those to the south are more gentle, bearing fine stands of conifers consisting of deodar (*Cedrus deodara*), blue pine (*Pinus excelsa*), and, on the lower slopes, chir pine. Till Pipalkoti, the bus terminus, however, there are few trees and it is difficult to find shade from the mid-day sun. There is a great need for reforestation on these lower slopes. At Joshimath there is very intense cultivation, but good oak exists higher up. Near here is Vishnu Prayag where the Dhauli Ganga meets the mother stream. Almost till Badrinath the road runs along the river through a deep, narrow gorge, what the geographers call a re-entrant. The valley floor now rapidly gains altitude and wherever the cliffs recede there are fine forests of deodar, horsechestnut and maple. A mile below the shrine, the track climbs what must be the terminal moraine of an extinct glacier. The valley floor from here on is very broad and the three miles to Mana village pass through cultivated fields surrounded by stone walls. Rain-bearing clouds fail to push up the re-entrant, and thus it is very dry and dusty. Desiccating winds from the Tibetan plateau force the snow-line higher than at Kedarnath. The alps at 12,000 ft., however, provide good pastures as do the meadows at the snout of the Satopanth Glacier and the scriptural source of the Alakananda—the Vasudhara Falls, where the valley is strewn with debris from crumbling cliffs, and thickets of wild rose, give security to rosefinches and shortwings. Juniper appears for the first time to be common on the mountains at 13,000 ft. Monals and snowcocks are plentiful above the shrine, and great flocks of both species of choughs wheel about in the sky overhead.

THE DHAULI GANGA VALLEY

This river system drains some of the noblest snow mountains in the world : Kamet, Mana, Hathi Parvat, Lampak, Hardev, Changabang, Dunagiri, Nanda Devi and Trisul to mention a few of the highest. The main gorge, for most of its length, is deep and steep-sided : a fantastic creation in rock. Till the Rishi gorge the forest is a continuation of the Alakananda type : oak, deodar, and blue pine. It progressively starts getting drier with the great Nanda Devi group of mountains to the south barring passage to the monsoon winds, and the forest is of weathered *Thuja* sp., a conifer of very untidy growth. Bird life is scarce, and for birds the middle reaches of the Dhauli are very uninteresting. Some very fine side-streams, however, flow into the Dhauli within this stretch, the largest of which is the Dunagiri Ghad. A trail leads up through excellent deodar and blue pine timber to the village of Dunagiri at 12,000 ft. situated in meadows filled with flowers and edged by

thickets of *R. campanulatum* and birch (*Betula utilis*). All around are breath-taking views of great mountains. The villagers raise a fine quality of potato, which are transported down to Joshimath on goats and sheep.

At Malari 10,000 ft. the main axis of the Himalayas is left behind and the traveller finds himself in the red mountains of the Zasker Range. The contours recede giving wide views of arid juniper-studded slopes scarred by landslides. A few deodars at Malari, a mixed stand of deodar and blue pine along the bend of the river near Bampa, and some blue pine at Temmersain are all that remain of the forest that once shaded these mountains. Wild roses grow in profusion around the fields. Rose-finches are common, and the screes abound with accentors. Snowcock and wild sheep inhabit the fringe of the snow.

West of Gamsali is a beautiful valley called the Amrit Ganga. On its shingle fed a pair of ibisbills, and among the rocks wagtails had nests, while Hodgson's pipits soared in nuptial flights. Red, orange and yellow pontentillas carpeted the turf and, protected from the dust raising gales of the main valley, snow lingered on longer than elsewhere. Though summer had been heralded by the Asiatic cuckoo at 14,000 ft. on the Kalla khal, here at the same height male blue-fronted redstarts had just arrived, and were staking out territories among snow-filled gullies.

There are clearly marked differences between the forest biotopes of the Mandakini and Alakananda valley systems which reflect directly upon the respective bird distributions in the two. On more sunny features birds will be found higher than on shaded slopes, much as snow lingers considerably more on the latter than on the former. The precise relationship of the various factors of altitude, slope etc. requires a very careful investigation. In addition to these there is the intrusion of man at all heights where cultivation is possible, and this introduces a new factor in the ecological set up. For the most part, it proves a destructive element affecting the delicate balance arrived at by nature through thousands of centuries of evolution. Erosion, resulting from faulty terracing, causes very severe damage to the steep slopes which are a characteristic feature of these mountains, and in time these have become not only useless for cultivation but the exposed parent rock renders them incapable of bearing the former vegetation, and at best they now carry only tangled shrubs of a thorny nature. Fortunately the very softness of the Himalayan rock, which accelerates the rate of erosion, appears to be of great value in rapid reforestation if properly undertaken as has been done in several places in the Mandakini Valley by the forest department. On the great rivers of the Himalayas depend the millions of people living in the Gangetic plain. Severe deforestation permits quick flow of water down the slopes, gathering momentum to create havoc, spreading floods in the low-lands at the foot of the mountains. The prime need therefore is to stop this despoiling of Himalayan forests. There is little doubt that an enlightened reforestation programme would solve the problem of erosion that is systematically making these hills sterile and incapable of sustaining anything valuable to man or animals.

I am greatly indebted to Mr. Gurdial Singh of the Doon School, Dehra Dun, for having introduced me to the truly Alpine heights above 12,000 ft. This has opened up a sphere far beyond limits I had ever hoped to explore.



THE DHAULI GANGA BELOW JUMMA :

A fierce gorge, very dry and devoid of much tree-growth. The side valleys, however, have fine forests.

(Photo : K. S. Lavkumar)



THE AMRIT GANGA : Sheep are pastured here on broad meadows. Hodgson's Pipits were breeding here.

LIST

Corvus macrorhynchos. Jungle Crow.

Common throughout the area in all types of country. Saw some circling overhead at 14,000 ft. in the Amrit Ganga Valley. It is likely that birds above 6,000 ft. may be the Carrion Crow, *C. corone*. They appeared to be larger with a distinctly wedged tail.

Urocissa erythrorhyncha. Redbilled Blue Magpie.

Common around edges of cultivation and in forest from 5,000 to 8,000 ft. A pair building nest near Ukhimath, May. These magpies are great mimickers, and one very realistically copied the challenge call of the Whitecrested Kalij Pheasant.

Urocissa flavirostris. Yellowbilled Blue Magpie.

Distribution almost identical with that of the last species, only that it keeps to higher country and thicker forest.

Dendrocitta formosae. Himalayan Treepie.

A bird of cultivation and oak forest from the level of the plains to about 6,000 ft.

Garrulus lanceolatus. Blackthroated Jay.

Very common in broad-leaved forests of the Mandakini Valley and on the Tungnath Mountain. Several birds flew down to pick up insects from the surface of the water at Deohra Tal in company with the next species. A pair with food in bill in dense forest at 7,000 ft.

Garrulus bispecularis. Himalayan Jay.

Keeps to thicker forest than the last species, but common in suitable forest especially in rhododendron thickets around the Deohra Tal.

Nucifraga caryocatactes. Himalayan Nutcracker.

Only a single bird seen in chir pine at about 4,000 ft. near Pipalkoti. These are birds of coniferous forests and must be very scarce in the Mandakini Valley, though they may prove to be common in the other two.

Pyrrhocorax pyrrhocorax. Redbilled Chough.

A bird of the rugged mountains above 10,000 ft. though it comes down much lower to feed. Common at Kedarnath, Badrinath and in the Dhauli Valley, where a few pairs were seen near Lata. Also Dunagiri.

Pyrrhocorax graculus. Yellowbilled Chough.

Same as the red-billed species. Very common near the Vasudhara Falls and in the upper Dhauli at Bampa, and on the Chor Hoti pass, 17,850 ft. and the Marchok La, 18,250 ft.

Parus monticolus. Greenbacked Tit.

Scarce in the Mandakini Valley, but common in the other two above 6,000 and up to 8,000 ft.

Lophophanes melanolophus. Crested Black Tit.

Very common in both broad-leaved and coniferous forest above 7,000 ft., almost up to tree-line. Freely breeding at 9,000 ft., at Vanyakund on the Tungnath Mountain in holes of gnarled oaks. Young in nest, May. Parents followed by young at Bampa, June.

Machlolophus xanthogenys. Yellowcheeked Tit.

Common in the lower Mandakini and in forest around Ukhimath, up to 5,000 ft.

Aegithaliscus concinnus. Redheaded Tit.

Not common in the Mandakini, but frequently seen with hunting parties of small birds, chiefly in deodar and blue pine forest in the other two valleys. Not met above 8,000 ft.

Sitta himalayensis. Whitetailed Nuthatch.

Singly or in small parties in forest on Tungnath Mountain. Common.

Sitta leucopsis. Whitecheeked Nuthatch.

A single specimen in deodar forest, Dunagiri Ghad, at 9,000 ft.

Garrulax leucolophus. Whitecrested Laughing-thrush.

Fairly common in the dry deciduous forest of the lower Mandakini, in small parties.

Garrulax albogularis. Whitethroated Laughing-thrush.

Common in forest undergrowth above Trijugi Narayan, around Deohra Tal and Tungnath Mountain right up to the very tree-line. Very confiding as they rummage among the mulch on the forest floor.

Trochalopteron erythrocephalum. Redheaded Laughing-thrush.

Not uncommon among undergrowth and in shrubs along streams, from 6,000 ft. to the edge of the tree-line. Singly and in pairs.

Trochalopteron lineatum. Streaked Laughing-thrush.

Common in cultivation at medium altitudes. Scarce at 8,000 ft.

Grammatoptila striata. Striated Laughing-thrush.

A bird of thick under-shrubs in dense forest at 6,000 ft. in the Mandakini Valley. Not uncommon, but difficult to see due to its skulking habits.

Turdoides terricolor. Jungle Babbler.

A small party in the Mandakini Valley in a field hedge at 6,000 ft.

Pomatorhinus erythrogenys. Rustycheeked Scimitar-babbler.

Fairly common in forest at 6,000 ft. in the Mandakini, where its liquid call can be heard everywhere.

Leioptila capistrata. Blackheaded Sibia.

Its loud trilling call heard in all types of forest at medium heights. Carrying food for young, May—at 6,000 ft.

Microscelis psaroides. Himalayan Black Bulbul.

Noisy flocks in all types of forest in the Mandakini Valley at medium altitudes. Seemed to prefer the chir and oak interfacies.

Molpastes cafer. Redvented Bulbul.

Met with upto 6,000 ft., in cultivation and in light forest at the edges of terraced slopes. Not common.

Molpastes leucogenys (leucogenys). Whitecheeked Bulbul.

Generally distributed up to 7,000 ft. throughout Garhwal, except in very dense forest.

Certhia himalayana. Himalayan Tree-creeper.

Apparently absent in oak forest. Seen only at Vanyakund in mixed forest. Not met with elsewhere in the Mandakini. In the other two valleys fairly common in conifer and temperate broad-leaved forest. A bird carrying nesting material at 9,000 ft. on Tungnath Mountain, May.

Tichodroma muraria. Wall-creeper.

Common on cliffs and rocks above Mana at 13,000 ft., and above Bampa. Haunts precipitous country.

Cinclus pallasi. Indian Brown Dipper.

Common on all the rivers and streams up to 11,700 ft. at Kedarnath, and at 12,000 ft. on the Amrit Ganga at Daldungi camping ground. Breeding was progressing at various stages on the Mandakini. Juvenile birds seen at 6,000 ft., young with their parents a little higher, and birds carrying food to nestlings at 9,000 ft., May.

Hodgsonius phoenicuroides. Hodgson's Shortwing.

Common in thickets at 10,000 ft., and higher, both in the Alakananda and the Dhaulī valleys. A great skulker, and rarely seen unless followed up by the loud whistle of the male.

Saxicola caprata. Indian Stonechat.

Generally distributed in cultivation and on grassy slopes from 3,000 to 7,000 ft. Breeding around Joshimath in June.

Rhodophila ferrea. Dark-grey Bushchat.

Common in Garhwal up to 10,000 ft., in cultivation and forest clearings.

Microcichla scouleri. Little Forktail.

Seen once on the Mandakini at 9,000 ft.

Phoenicurus frontalis. Bluefronted Redstart.

A redstart of the high Himalayas common above 10,000 feet in the Alakananda and the Dhaulī Valleys, where they are met with right up to 14,500 ft. Breeding above Badrinath and at Bampa, where a pair had nested under the eaves of a house. A single male flitting over snow drifts at Kedarnath.

Phoenicurus erythrogaster grandis. Gldenstadt's Redstart.

A single bird at 16,000 ft. below the Bamlas La in the Dhauli Valley. A redstart of great heights.

Chaimarrhornis leucocephalus. Whitecapped Redstart.

A familiar bird of Himalayan streams above 8,000 ft. Breeding under eaves of a house in Badrinath, June, and in the Amrit Ganga Valley at 12,500 ft.

Rhyacornis fuliginosus. Plumbeous Redstart.

Common at all heights above 3,000 ft. and up to 12,000 ft. on the Amrit Ganga. Breeding in progress in the Mandakini Valley; young in nest under eaves of a house at Gaurikund 6,000 ft., and a nest under construction in river bank at 9,000 ft.

Calliope pectoralis. Himalayan Rubythroat.

A bird of the boulder-strewn Himalayan slopes above 10,000 ft. Common in the upper Alakananda, at Temmersain, and around the village of Dunagiri. The male sings perched exposed on some large boulder.

Tarsiger brunnea. Indian Blue Chat.

Keeps to dense cover in forest and in open shrubberies at its edge, above 6,000 ft. Very difficult to see, but the male has a loud and intriguing whistle which gives away his presence.

Tarsiger chrysaeus. Golden Bush-robin.

A pair at 11,000 ft. in the Mandakini Valley, restricted to a patch of scrub, where I saw the magain after four days on the return from Kedar-nath. Very confiding.

Adelura caeruleocephala. Blueheaded Robin.

A pair in deodar forest at 8,000 ft. in the Dunagiri Ghad. Very agitated at my presence and undoubtedly had young in the vicinity. June.

Copsychus saularis. Indian Magpie-robin.

Not uncommon in the lower Mandakini up to Gupta Kashi.

Turdus albocinctus. Whitecollared Blackbird.

Common above 7,000 ft. in the Mandakini. Breeding at Vanyakund on the Tungnath Mountain at 9,000 ft. The male sings before and after dawn and dusk respectively.

Turdus boulboul Greywinged Blackbird.

A bird of lower altitudes than the last species. Common in the broad-leaved forest of the Tungnath Mountain where it was breeding at 6,000 ft.

Turdus viscivorus. Himalayan Mistle-thrush.

Very numerous above 8,000 ft. both in forest and on meadows. Also on high alps at 12,000 ft. on Tungnath Mountain.

Monticola erythrogastra. Chestnutbellied Rock-thrush.

A male singing in high oak forest near the tree-line at 11,000 ft., below Tungnath shrine.

Monticola solitaria. Blue Rock-thrush.

A single male seen by Gurdial Singh at over 16,000 ft. above Temmersain in the Dhauli Valley. To me this bird seems to have a very erratic distribution in the Himalayas. Both here and in Nepal [*vide JBNHS*, Vol. 53 (1): 32] it appears to live at great altitudes on the driest of slopes or cliffs, whereas in the Simla hills I found it very common on the cliffs overhanging the Narkanda road between Fagu and Theog.

Monticola cinclorhyncha. Blueheaded Rock-thrush.

A bird of the chief forest and rocky grass-covered slopes between Pipalkoti and Joshimath. Common. Perching freely on the telegraph wires. Male's display song heard throughout the day.

Myiophonus temminckii. Himalayan Whistling-thrush.

One of the few birds impartial to heights, from the foot of the mountains to the snow slopes of Kedarnath at 11,500 ft. On all rivers and streams as well as in oak forest bordering flowing water of any size. A bird carrying food to nest just above the swirling waters of the Dhauli near Jummagwar, June.

Laiscopus collaris. Alpine Accentor.

Common on the inner Himalayas above 13,000 ft. on the edge of snow fields. Seems to prefer scree-covered slopes to smooth alpine meadows.

Prunella strophiata. Rufousbreasted Accentor.

A bird of juniper and scree slopes at and above 12,000 ft. Apparently breeding at Temmersain, June.

Hemichelidon sibirica. Sooty Flycatcher.

Very plentiful in oak and conifer at 9,000 ft. on the Tungnath Mountain. A bird incubating, May. Nest: a small cup placed on a branch in a very exposed position, high up in a spruce.

Muscicapula superciliaris. Whitebrowed Flycatcher.

In all types of forest from 7,000 ft. to 10,000 ft. A pair had young in nest at Vanyakund, May. The nest was high up in a spruce, in a cavity draped with moss.

Eumyias thalassina. Verditer Flycatcher.

Generally distributed in forest from 6,000 to 9,000 ft., commonest at 7,000 ft. Seems to prefer broad-leaved forest.

Cuculicapa ceylonensis. Greyheaded Flycatcher.

Met with in all types of forest below 8,000 ft. Commonly associates with mixed hunting parties of small birds.

Tchitrea paradisi. Paradise Flycatcher.

A pair seen bathing at dusk in the cold water of the Mandakini at 5,000 ft. near Gupta Kashi; the male in full adult plumage.

Chelidorhynch hypoxantha. Yellowbellied Fantail Flycatcher.

A family party of this beautiful little bird was seen at 10,000 ft. in rhododendron thickets on Tungnath Mountain.

Lanius schach. Rufousbacked Shrike.

A pair at 10,000 ft. near Malari, and another pair in the Pipalkoti dak bungalow compound.

Pericrocotus brevirostris (or ethologus ?). Shortbilled Minivet.

A familiar bird of the Himalayan forest up to 9,000 ft. Appears to be commoner in mixed forest. A pair building high up in a blue pine at Vanyakund on Tungnath Mountain, May.

Dicrurus macrocercus. Black Drongo.

Seen in the Mandakini up to about 5,000 ft. elevation.

Dicrurus leucophaeus. Grey Drongo.

A slim drongo of the hill forest and cultivation edges up to a little above 7,000 ft. Very common.

Phylloscopus affinis. Tickell's Leaf-warbler.

From 9,000 ft. up to any height where there is sufficient shrub cover this little bird is common. Dome-shaped nests in thickets at varying heights from the ground. Building at Bampa, June.

Phylloscopus occipitalis. Large Crowned Leaf-warbler.

Freely breeding in gnarled oak trees at Vanyakund, May. Most nests had young.

Phylloscopus. spp.

A large number of other species of this difficult genus occur in the Himalayas at all heights and in all types of forest and cultivation. A very careful study is required to diagnose the various species accurately.

Seicercus xanthoschistos. Greyheaded Flycatcher-warbler.

Very common up to 7,000 ft. in undergrowth in coniferous as well as broad-leaved forest, in all three valleys. Forms cheerful hunting parties with redheaded tits that are such a feature of these Himalayas.

Suya criniger. Brown Hill-warbler.

Common on grassy slopes and in cultivation at medium altitudes.

Oriolus oriolus kundoo. Indian Oriole.

Plentiful in mango groves of the lower valleys. Its melodious call is the most familiar bird call of these parts.

Saroglossa spioptera. Spottedwinged Stare.

Flocks in cultivation and forest at 6,000 ft. in the Mandakini Valley. Heard of flock at 10,000 ft. near Malari.

Acridotheres tristis. Common Myna.

Seen in cultivation up to 6,000 ft. in the Mandakini Valley.

***Pyrrhospiza punicea*.** Redbreasted Rosefinch.

A small flock of both sexes at Kedarnath. The birds showed little fear at being watched, and permitted a very close approach. On rising, they flew only a little distance to settle behind some boulders. Kept to the edges of small streams from the melting snows.

***Propasser rhodochrous*.** Pinkbrowed Rosefinch.

Kedarnath, Badrinath and in the Dhauli Valley at Bampa, where they freely entered the villages and in all respects replaced the house sparrow of the lower altitudes. This finch seems more free in its habitat than the last, being found along moist turf as well on the driest grass-covered slopes. Freezes on approach, and only if the intruder stands quite still will it start feeding again. Once on the wing, however, it flies fast up the slope for a considerable distance before alighting.

***Carpodacus erythrinus (roseatus)*.** Common Indian Rosefinch.

Saw none at Kedarnath, though in late July there were quite a number of males in brilliant plumage among the briar thickets above Mana. They had obviously just arrived from their winter quarters and were very shy. In late July, the males were singing beautifully at Bampa and showed little fear of the observer. On the whole they are shier than the last two birds. A party of females at Mandal Chatti in late May. On passage?

***Metaponia pusilla*.** Goldfronted Finch.

Very common in the Dhauli Valley between 8,000 and 12,000 ft. These birds are very much on the move all the time and seldom does an observer get a chance to view them properly in the forest zone. However, at Bampa they settled to glean grass seeds along streams and then could be carefully stalked. At such times they behaved as though completely oblivious of the observer's presence and permitted a very close approach indeed.

***Hypacanthis spinoides*.** Himalayan Greenfinch.

A few birds in the Mandakini Valley at about 6,000 ft. in May. They were very common in the Dhauli Valley from Malari to Joshimath in late July, on our return from Tibet.

***Gymnorhis xanthocollis*.** Yellowthroated Sparrow.

Below 5,000 ft. in the Mandakini Valley.

***Passer domesticus*.** Indian House-sparrow.

Common at most chattis below 6,000 ft. Possibly extending its range into the mountains as it has done in other parts of the Himalayas.

***Passer rutilans*.** Cinnamon Tree-sparrow.

In cultivation at 6,000 ft. in the Mandakini Valley. Not very common.

***Montifringilla* sp.** Snowfinch.

A single bird seen in flight over snow at 16,000 ft. on the Chor Hoti Pass.